SONY

COMPONENT OUTPUT BOARD

SVBK-170P

SERVICE MANUAL

1st Edition

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English

Before operating the unit, please read this manual thoroughly and retain it for future reference.

Introduction

The SVBK-170 Component Output Board is designed as an optional board for the SVO-5800/5800P Sony Videocassette Recorder and the SVP-5600/5600P Sony Videocassette Player.
When this board is installed in the recorder/player, a component video signal output is possible. Therefore, the recorder/player can be used as a signal source in a component video editing system for A/B role editing.

The main features of this board are the following:
- It converts the Y/C video signal output from the recorder/player into the component video signal (Y, R-Y, B-Y), which conforms to the BETACAM format.
- Since the recorder/player has the component output terminals (3 BNC connectors), you only need to install this board in the option slot of the recorder/player.

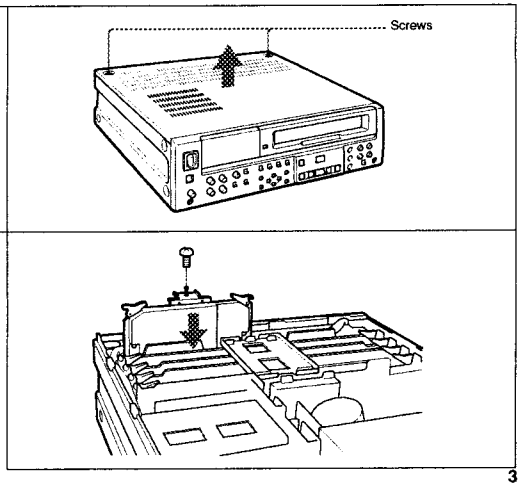
Installation

Since the following illustrations show the SVO-5800/5800P recorder, the installation procedure is common to all models.

Note

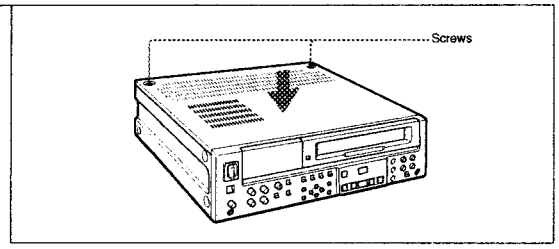
For installation of the SVBK-170 board, consult your Sony dealer.

1 Detach the top panel from the recorder/player.



2 Fully insert the SVBK-170 board into the option slot of the recorder/player until it is locked, and secure the board using the supplied screw.

3 Replace the top panel.



Specifications

Video input
NTSC
Y/C signal from the SVO-5800/5800P or SVP-5600/5600P with 75 % CB, 7.5 % SET UP, 100 % WHT REF
Y: VS 1.0 Vp-p
C: 0.286 Vp-p burst
PAL
Y/C signal from the SVO-5800/5800P or SVP-5600/5600P with 100 % CB, NON SET UP, 100 % WHT REF
Y: VS 1.0 Vp-p
C: 0.3 Vp-p burst

Video output
NTSC
Y, R-Y, B-Y signal (conforming to the BETACAM format: with 75 % CB, 7.5 % SET UP, 100 % WHT REF)
Y: VS 1.0 Vp-p, 75 ohms, sync negative
R-Y: 0.7 Vp-p, 75 ohms
B-Y: 0.7 Vp-p, 75 ohms
PAL
Y, R-Y, B-Y signal (with 100 % CB, NON SET UP, 100 % WHT REF)
Y: VS 1.0 Vp-p, 75 ohms, sync negative
R-Y: 0.7 Vp-p, 75 ohms
B-Y: 0.7 Vp-p, 75 ohms

Power consumption 3.5 W
Dimensions 177 × 105 × 20 mm (w/h/d) (7 × 4 1/4 × 3/32 inches)
Mass Approx. 120 g (4.2 oz)
Accessories supplied
Screw for securing the board (1)
Operating instructions (1)

Design and specifications are subject to change without notice.

This section is extracted from operation manual.

SECTION 2
SERVICE OVERVIEW

2-1. NOTES ON SPARE PARTS

2-1-1. Notes on Spare Parts

1. Standardization of Parts
   Spare parts supplies form Sony Parts Center may not be always identical with the parts which actually in use due to "accommodating the improved parts and/or engineering changes" or "standardization of genuine parts".
   This manual's exploded views and electrical spare parts list are indicating the part numbers of "the standardized genuine parts at present."

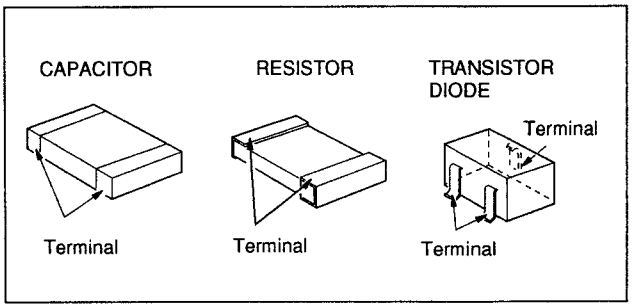
2. Stock of Parts
   Parts marked with "o" in SP (Supply code) column of the spare parts list are not normally required for routine service work. Orders for parts marked with "o" will be processed, but allow for additional delivery time.

3. Units for Capacitors, Inductors and Resistors
   The following units are assumed in schematic diagrams, electrical parts list and exploded views unless otherwise specified:
   Capacitors : μF in schematic diagram
   : F of pF in schematic diagram
   Resistors : Ω

2-1-2. Replacement Procedure for Chip Parts

Required Tools
Soldering iron : 20 W
If possible, use a soldering iron tip heat-controller at 270 ± 10 °C.
Braided wire : SOLDER TAUL or equivalent
Sony part No. 7-641-300-81
Solder : 0.6 mm dia. is recommended.
Tweezers

Soldering Conditions
Soldering iron temperature : 270 ± 10 °C.
Soldering time: less than two seconds per a pin.



- **Resistor and Capacitor Replacement**

1. Place the soldering iron tip onto the chip part and heat it up until the solder is melted. When the solder is melted, slide the chip part aside.
2. Make sure that there is no pattern peeling, damage and / or bridges around the desoldering positions.
3. After removing the chip part, presolder the area, in which the new chip part is to be placed, with a thin layer of solder.
4. Place new chip part in the desired position and solder both ends.

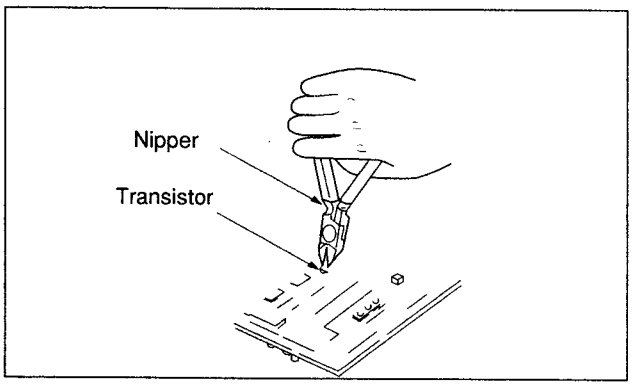
CAUTION
Once a chip part has been removed never use it again.

• Transistor and Diode Replacement

1. Cut the terminals of the chip part with a nipper.
2. Remove the cut leads.
3. Make sure that there is no pattern peeling, damage and/ or bridges around the desoldering positions.
4. After removing the chip part, presolder the area, in which the new chip part is to be placed, with a thin layer of solder.
5. Place new chip part in the desired position and solder the terminals.

CAUTION

Once a chip part has been removed never use it again.



• **IC Replacement**

1. Using the desoldering wire, "SOLDER TAUL" Sony Part No. 7-641-300-81, remove the solder around the pins of the IC-chip to be removed.
2. While heating up the pins, remove the pins one by one using sharp-pointed tweezers.
3. Make sure that there is no pattern peeling, damage and/ or bridges around the desoldering positions.
4. After removing the chip part, presolder the area, in which the new chip part is to be placed, with a thin layer of solder.
5. Place new chip part in the desired position and solder the pins.

CAUTION

Once a chip part has been removed never use it again.

SECTION 3
ELECTRICAL ALIGNMENT

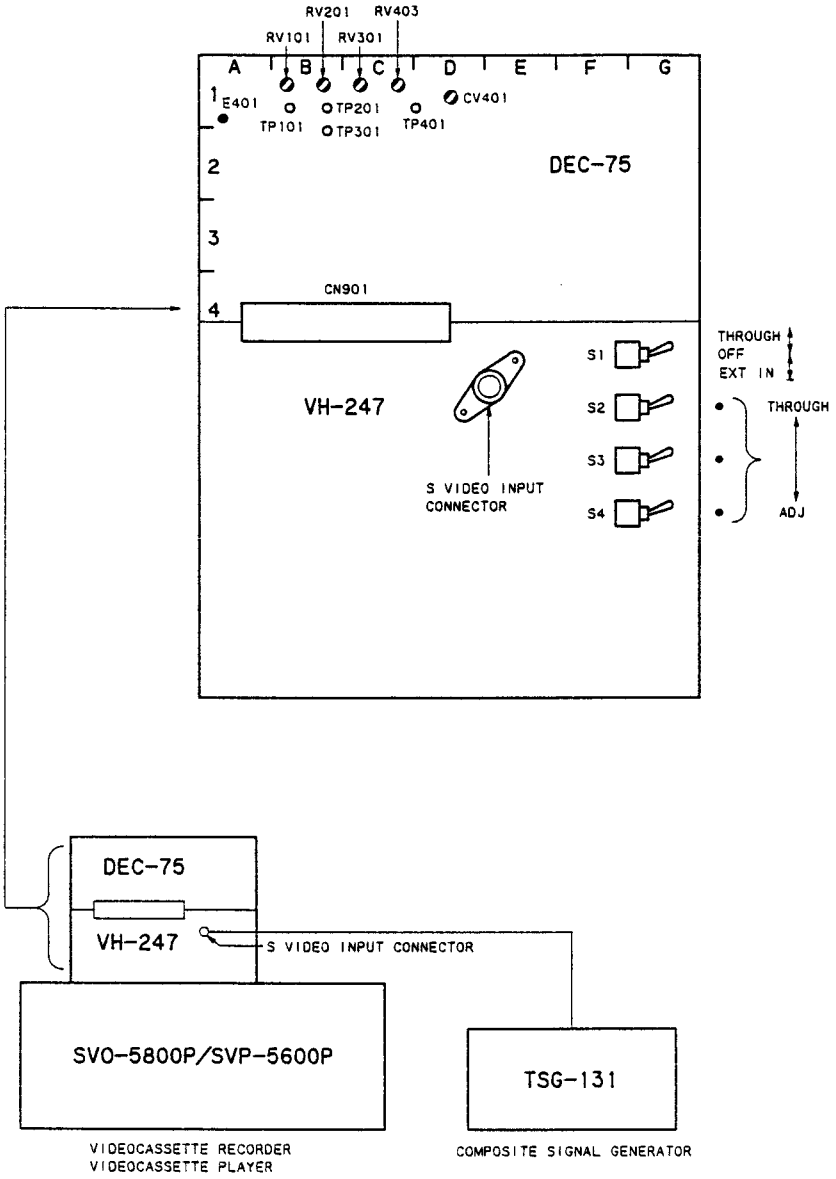
[Equipment Required]

- Videocassette Recorder/Videocassette Player(SVO-5800P/SVP-5600P)
- Oscilloscope(TEKTRONIX 2445B/150 MHz or more)
- Frequency Counter(ADVANTEST TR5821AK)
- Composite Signal Generator(TSG-131)
- VH-247 Extension Board(SONY Parts No. J-6382-470-A)

[Note]

When perform electrical alignment, need the extension board. (Connect the extension board after turn the power off.)

[Connecton]

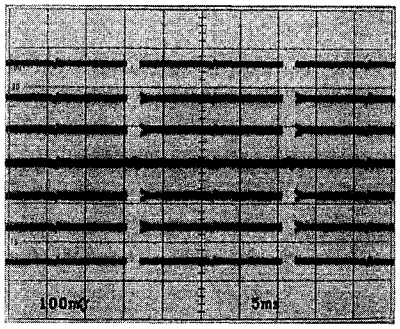
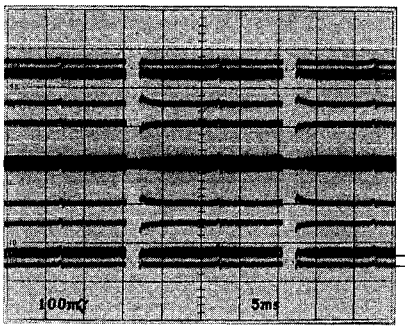


3-1. REF OSC ADJUSTMENT

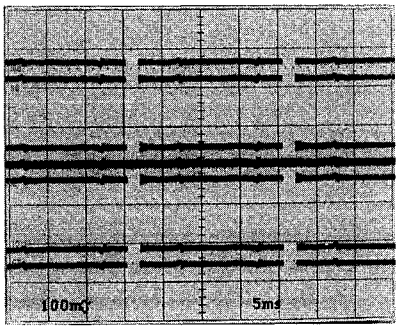
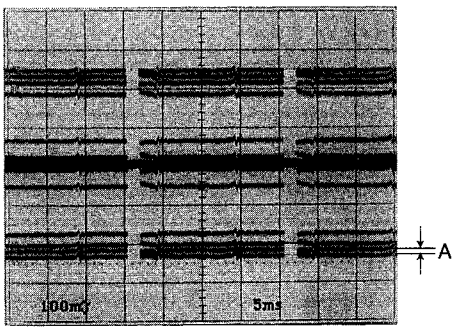
Machine condition for adjustment	Specifications	Adjustments
• VIDEO IN : no signal • STOP(E-E) mode • Connect the frequency counter to TP401(D-2) through an oscilloscope. • S1/VH-247 : OFF	TP401/DEC-75(D-2) 4433619 ± 5 Hz	⊘ CV401/DEC-75(D-1)

3-2. HUE ADJUSTMENT

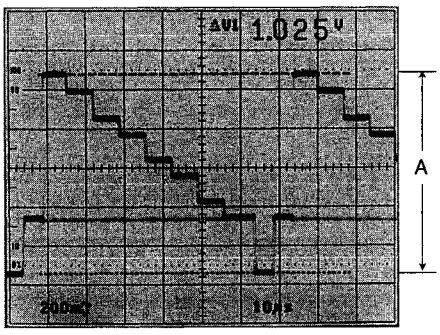
3-2-1. B-Y HUE ADJUSTMENT

Machine condition for adjustment	Specifications	Adjustments
• S Video Input Connector/VH-247 : 75% COLOR BARS • S1/VH-247 : EXT IN S2/VH-247 : ADJ S3/VH-247 : ADJ S4/VH-247 : ADJ	TP301(B-2) OK  NG  No level difference (each 1H signals) (A≦10mV)	⊘ RV403/DEC-75(C-1)

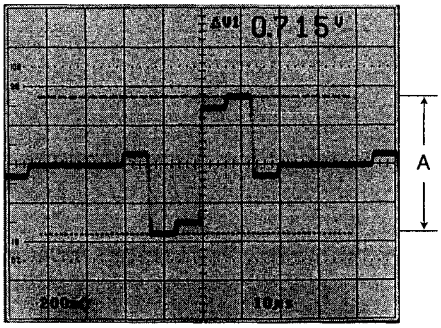
3-2-2. R-Y HUE ADJUSTMENT

Machine condition for adjustment	Specifications	Adjustments
• S Video Input Connector/VH-247 : 75% COLOR BARS • S1/VH-247 : EXT IN S2/VH-247 : ADJ S3/VH-247 : ADJ S4/VH-247 : ADJ	TP201(B-2) OK  NG  A No level difference (each 1H signals) (A≦10mV)	● CV402/DEC-75(D-3)

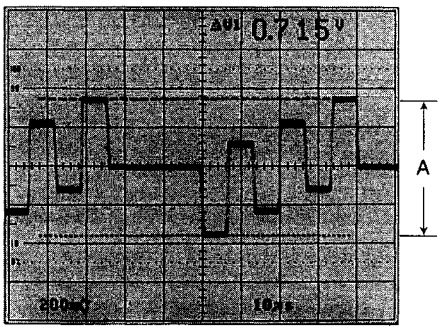
3-3. Y OUTPUT LEVEL ADJUSTMENT

Machine condition for adjustment	Specifications	Adjustments
• S Video Input Connector/VH-247 : 100% COLOR BARS • S1/VH-247 : EXT IN S2/VH-247 : ADJ S3/VH-247 : ADJ S4/VH-247 : ADJ	TP101(B-1)  A A = 1.025± 0.02 Vp-p	● RV101/DEC-75(B-1)

3-4. R-Y OUTPUT LEVEL ADJUSTMENT

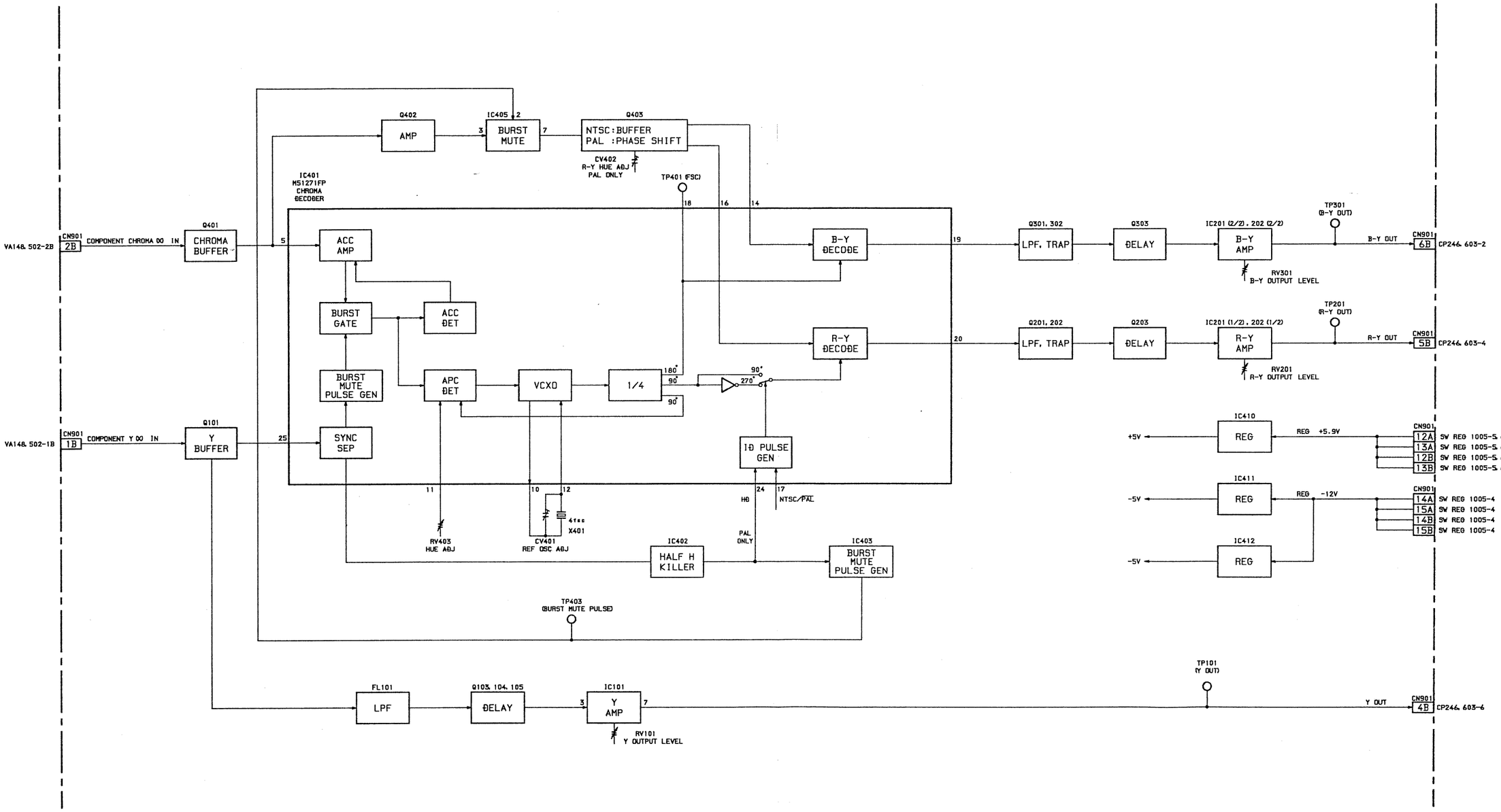
Machine condition for adjustment	Specifications	Adjustments
• S Video Input Connector/VH-247 : 100% COLOR BARS • S1/VH-247 : EXT IN S2/VH-247 : ADJ S3/VH-247 : ADJ S4/VH-247 : ADJ	TP201(B-1)  A = 0.715 ± 0.014 Vp-p	⊘ RV201/DEC-75(B-1)

3-5. B-Y OUTPUT LEVEL ADJUSTMENT

Machine condition for adjustment	Specifications	Adjustments
• S Video Input Connector/VH-247 : 100% COLOR BARS • S1/VH-247 : EXT IN S2/VH-247 : ADJ S3/VH-247 : ADJ S4/VH-247 : ADJ	TP301(B-2)  A = 0.715 ± 0.014 Vp-p	⊘ RV301/DEC-75(C-1)

SECTION 4
BLOCK DIAGRAM

DEC-75 ; CHROMA DECODER



DEC-75

SVBK-170/170P (1)

SECTION 5
SCHEMATIC DIAGRAM AND BOARD LAYOUT

In the schematic diagrams, the following marks are described near by reference number.
These are parts data at factory.

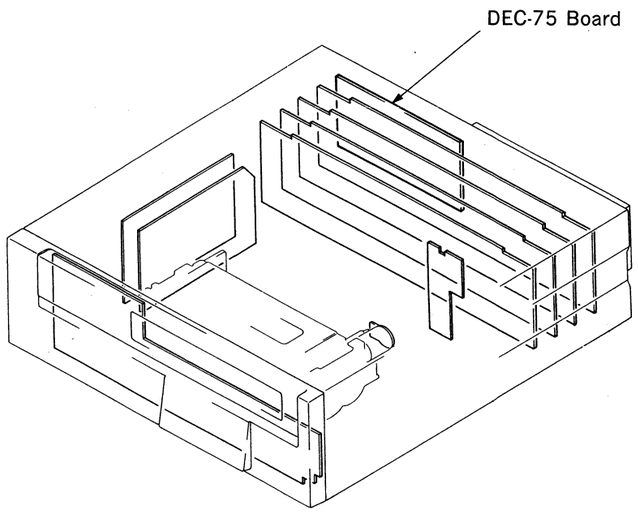
CAPACITOR (C)

AL, AS	ELECTROLYTIC
TA	TANTALUM
CA, CC, CCS, CM, CS	CERAMIC
MPS, PP, PS, PT	MYLAR
MD	DIPPED MICA
MS	MICA

RESISTOR (R)
VARIABLE RESISTOR (RV)

RC, RD	CARBON
RF	FUSE
RN, RS	METAL
RW	WIERWOUND

The mentioned items at waveform photograph of this section are measurment point (board location), and machine operation mode.



5-1

DEC-75 ; CHROMA DECODER

DEC-75 (1-653-706-11)

CN901 C-4

CV401 D-1

D400 E-2 *
D401 D-2 *

E401 A-1

FL101 B-3
FL201 D-3
FL301 D-3

IC101 A-1
IC201 C-2
IC202 C-2
IC401 E-2
IC402 F-2
IC403 F-2
IC404 F-2
IC405 D-3
IC410 F-4
IC411 F-3
IC412 F-3

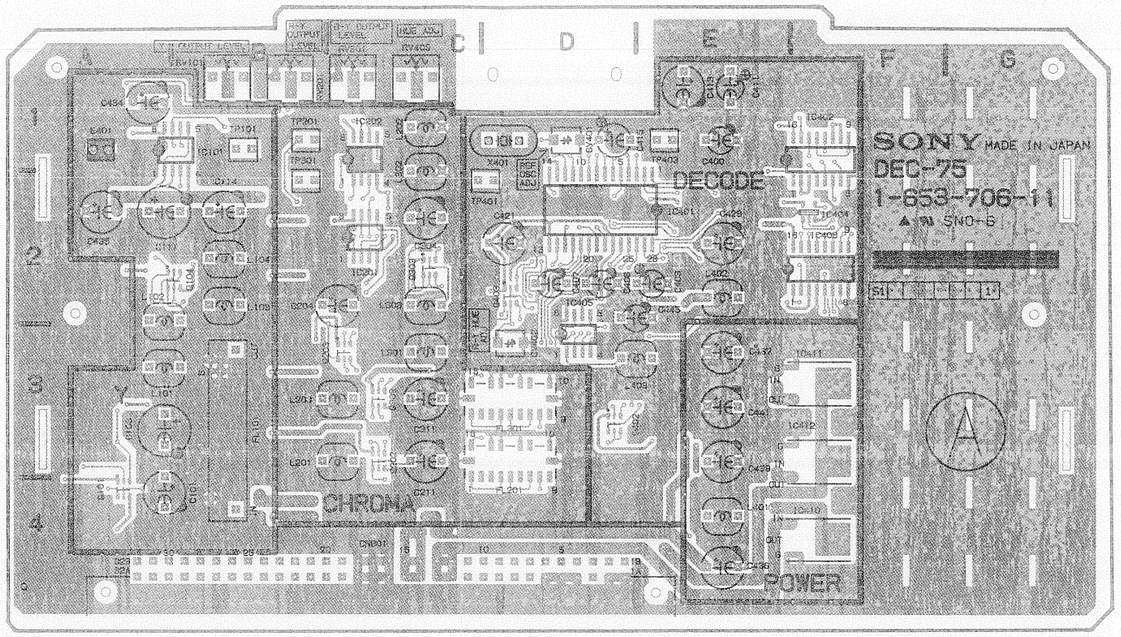
Q101 A-4
Q103 B-3 *
Q104 B-2
Q105 B-2 *
Q201 D-3 *
Q202 C-3
Q203 C-3
Q301 D-3 *
Q302 C-3
Q303 C-2
Q401 E-3 *
Q402 D-3
Q403 D-2

RV101 B-1
RV201 B-1
RV301 C-1
RV403 C-1

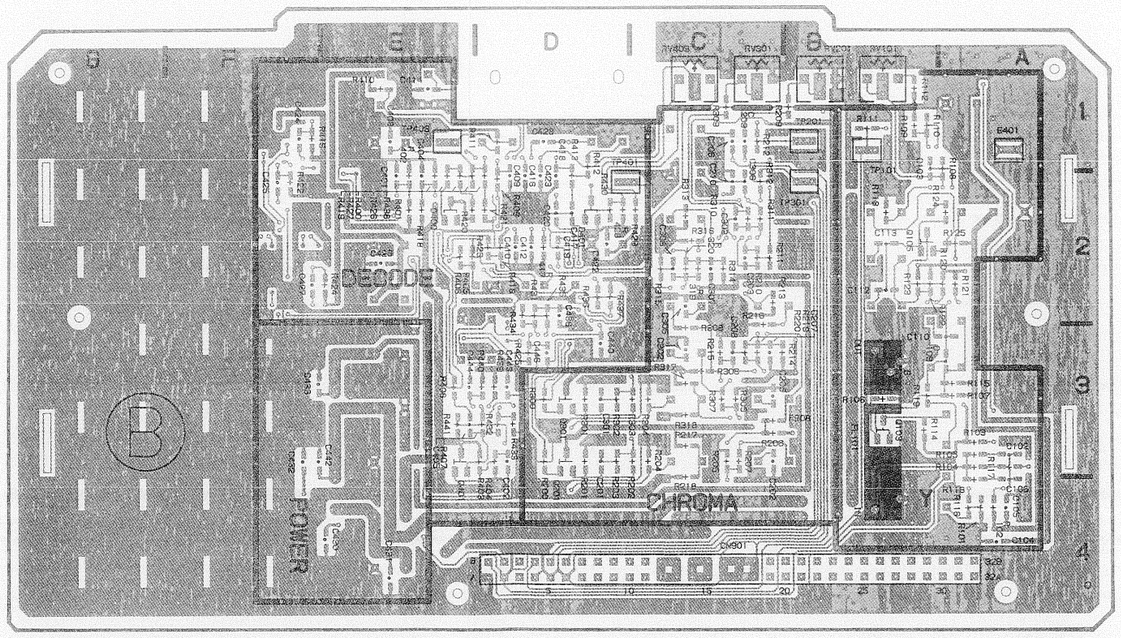
TP101 B-1
TP201 B-1
TP301 B-2
TP401 D-2
TP403 E-1

X401 D-1

* mark ; B SIDE mount

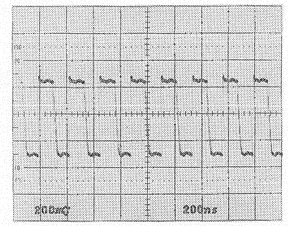


DEC-75 — A SIDE —
1-653-706-11
SVBK-170P

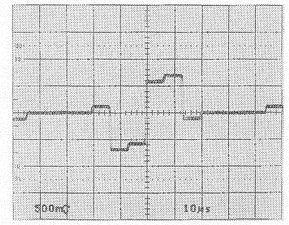


DEC-75 — B SIDE —
1-653-706-11
SVBK-170P

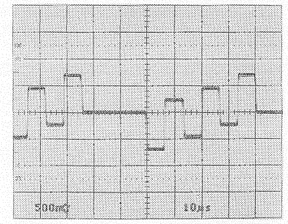
① TP401 (D-2) STOP (E-E) mode



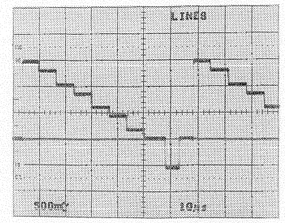
② TP201 (B-1) STOP (E-E) mode



③ TP301 (C-1) STOP (E-E) mode



④ TP101 (B-1) STOP (E-E) mode



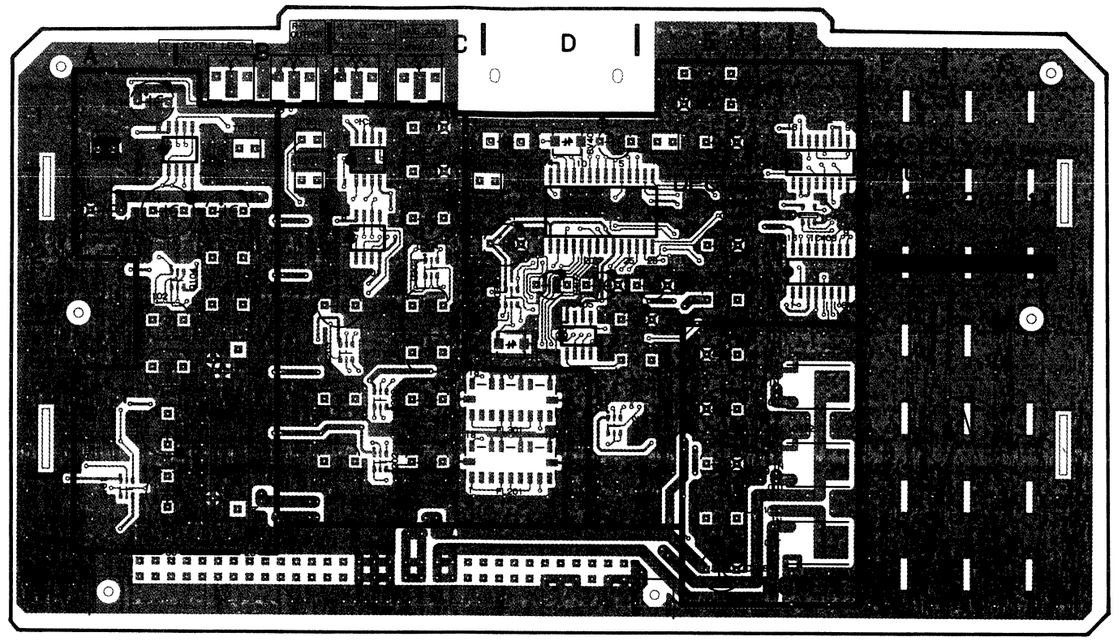
Measurement Condition
S-VIDEO IN : 100 % COLOR BARS
STOP (E-E) mode

DEC-75 ; CHROMA DECODER

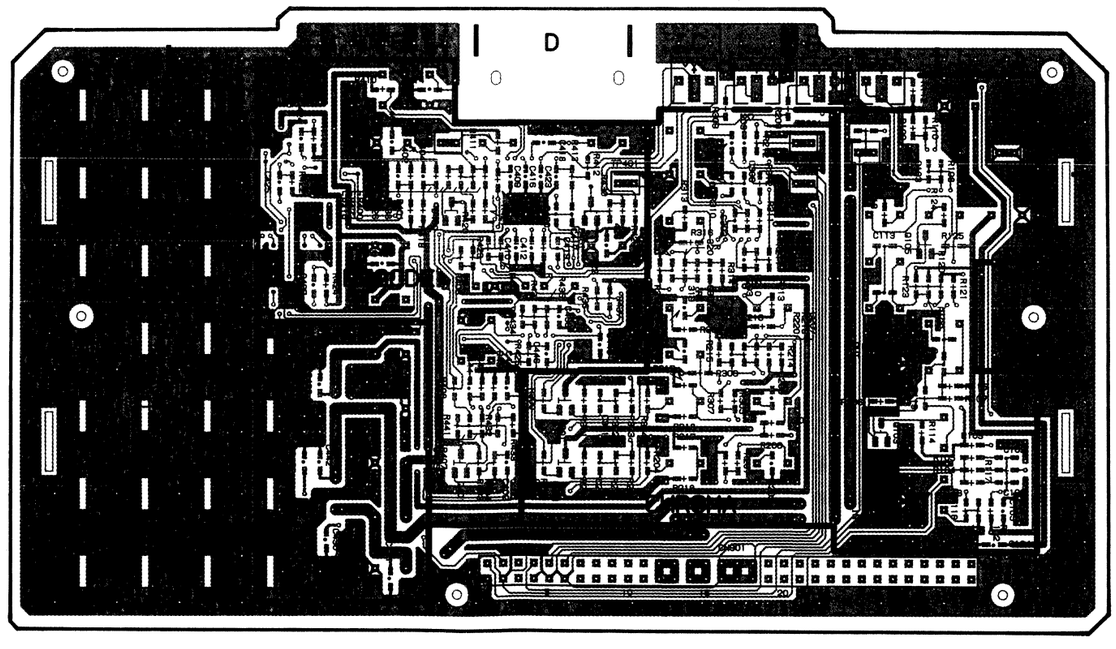
DEC-75 (1-653-706-11)

CN901	C-4
CV401	D-1
D400	E-2 *
D401	D-2 *
E401	A-1
FL101	B-3
FL201	D-3
FL301	D-3
IC101	A-1
IC201	C-2
IC202	C-2
IC401	E-2
IC402	F-2
IC403	F-2
IC404	F-2
IC405	D-3
IC410	F-4
IC411	F-3
IC412	F-3
Q101	A-4
Q103	B-3 *
Q104	B-2
Q105	B-2 *
Q201	D-3 *
Q202	C-3
Q203	C-3
Q301	D-3 *
Q302	C-3
Q303	C-2
Q401	E-3 *
Q402	D-3
Q403	D-2
RV101	B-1
RV201	B-1
RV301	C-1
RV403	C-1
TP101	B-1
TP201	B-1
TP301	B-2
TP401	D-2
TP403	E-1
X401	D-1

* mark ; B SIDE mount

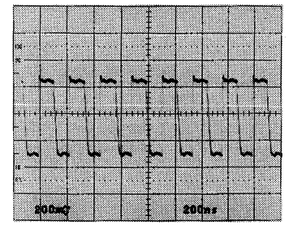


DEC-75 — A SIDE —
1-653-706-11
SVBK-170P

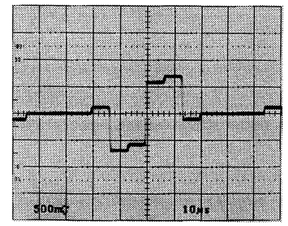


DEC-75 — B SIDE —
1-653-706-11
SVBK-170P

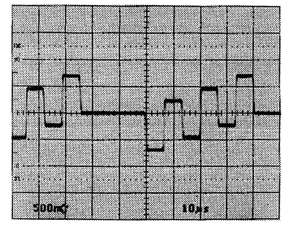
① TP401 (D-2) STOP (E-E) mode



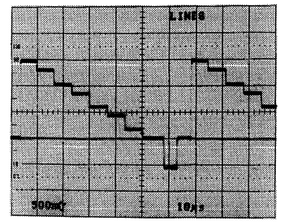
② TP201 (B-1) STOP (E-E) mode



③ TP301 (C-1) STOP (E-E) mode

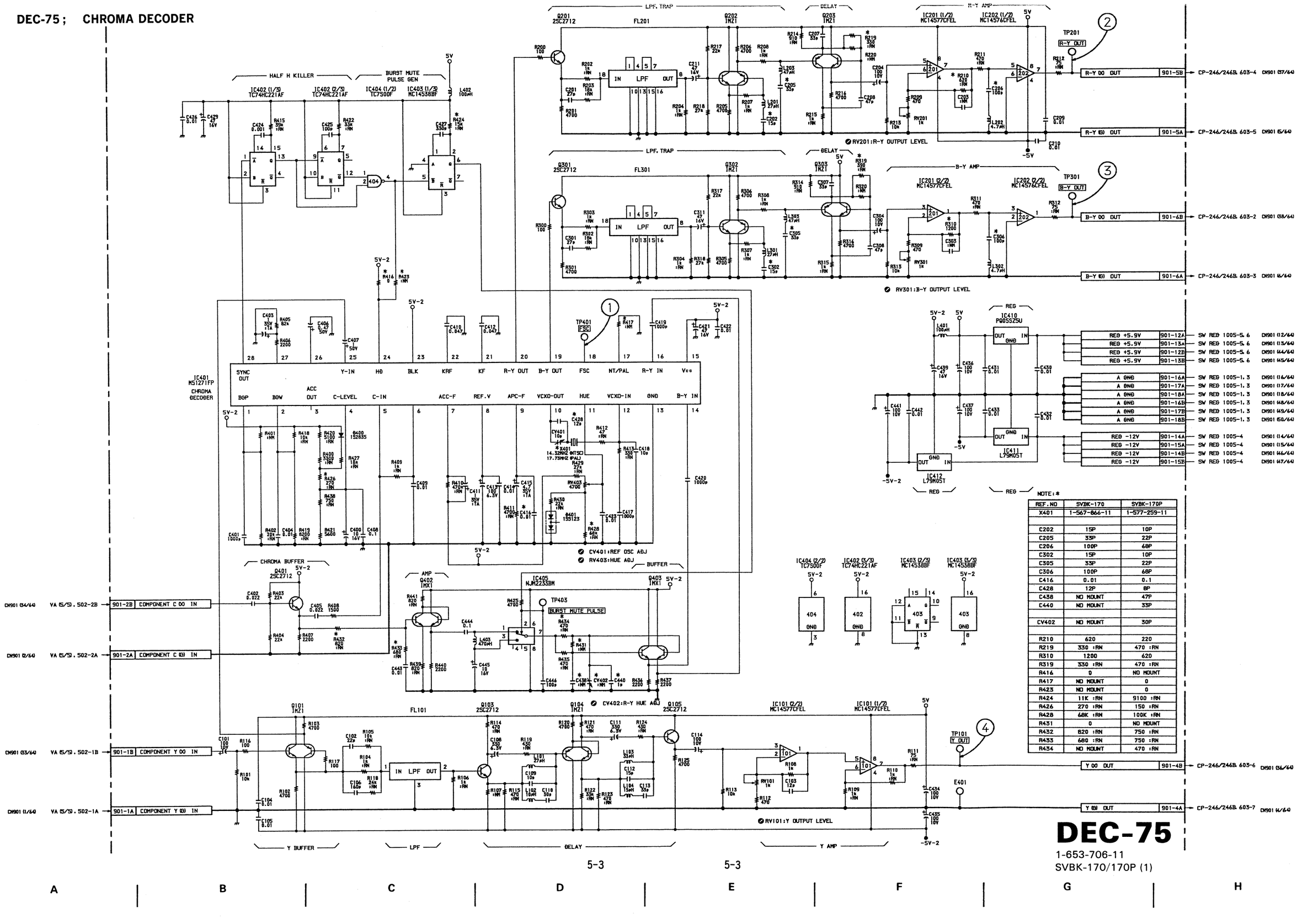


④ TP101 (B-1) STOP (E-E) mode



Measurement Condition
S-VIDEO IN : 100 % COLOR BARS
STOP (E-E) mode

DEC-75 ; CHROMA DECODER



NOTE:*

REF.NO	SVBK-170	SVBK-170P
X401	1-567-866-11	1-577-259-11
C202	15P	10P
C205	33P	22P
C206	100P	68P
C302	15P	10P
C305	33P	22P
C306	100P	68P
C416	0.01	0.1
C428	12P	8P
C438	NO MOUNT	47P
C440	NO MOUNT	33P
CV402	NO MOUNT	30P
R210	620	220
R219	330 :RN	470 :RN
R310	1200	620
R319	330 :RN	470 :RN
R416	0	NO MOUNT
R417	NO MOUNT	0
R423	NO MOUNT	0
R424	11K :RN	9100 :RN
R426	270 :RN	150 :RN
R428	68K :RN	100K :RN
R431	0	NO MOUNT
R432	820 :RN	750 :RN
R433	680 :RN	750 :RN
R434	NO MOUNT	470 :RN

DEC-75

1-653-706-11
SVBK-170/170P (1)

A B C D E F G H

SECTION 6
SEMICONDUCTOR PIN ASSIGNMENTS

ICs, transistors and diodes that functions are equivalent are described here. Therefore, incompatible device names may be described together. For parts replacement, refer to the Spare Parts section in this manual.

IC	PAGE
L79M05T-FA	6-2
M51271FP	6-2
MC14538BF	6-2
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MC14576CF	6-2
MC14577CF	6-2
NJM2233BM	6-3
SC7S00F	6-3
TC74HC221AF	6-3
TC7S00F	6-3
TC7S00FU	6-3
PQ05SZ5U	6-3

TRANSISTOR	PAGE
2SC2712	6-3
2SC2712G	6-3
IMX1	6-3
IMZ1	6-3

DIODE	PAGE
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1S2836	6-3
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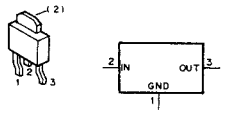
1SS226	6-3
MA153	6-3

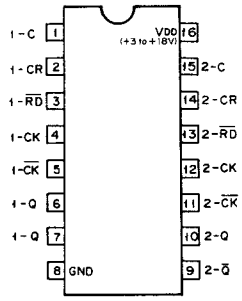
The circuit diagram of each IC is obtained from the IC data book published by the manufacturer.

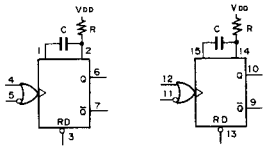
IC

L79M05T-FA (SANYO) – 5 V
NEGATIVE VOLTAGE REGULATOR (500 mA)

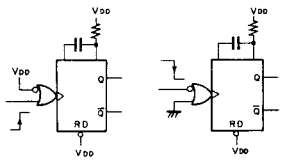


MC14538BF (MOTOROLA) FLAT PACKAGE
C-MOS DUAL RETRIGGERABLE MONOSTABLE MULTIVIBRATORS
– TOP VIEW –

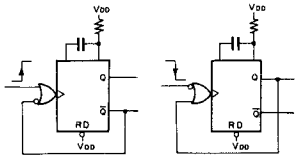




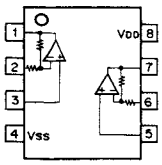
RETRIGGERABLE M.M.V



NON-RETRIGGERABLE M.M.V

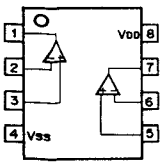


MC14576AF (MOTOROLA) FLAT PACKAGE
MC14576CF (MOTOROLA) FLAT PACKAGE
C-MOS DUAL VIDEO AMPLIFIERS
– TOP VIEW –



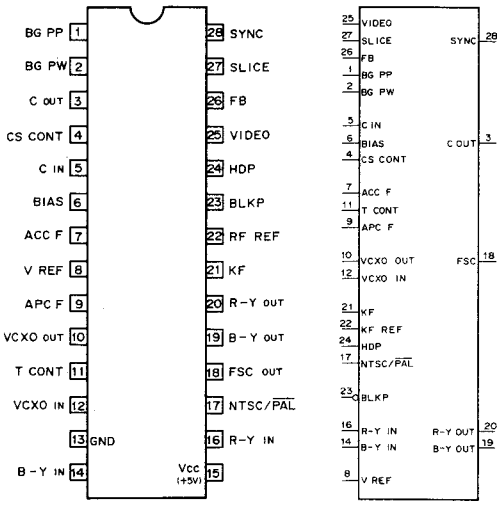
※|VDD+|Vss|=+5V to +12V

MC14577CF (MOTOROLA) FLAT PACKAGE
C-MOS DUAL VIDEO AMPLIFIERS
– TOP VIEW –

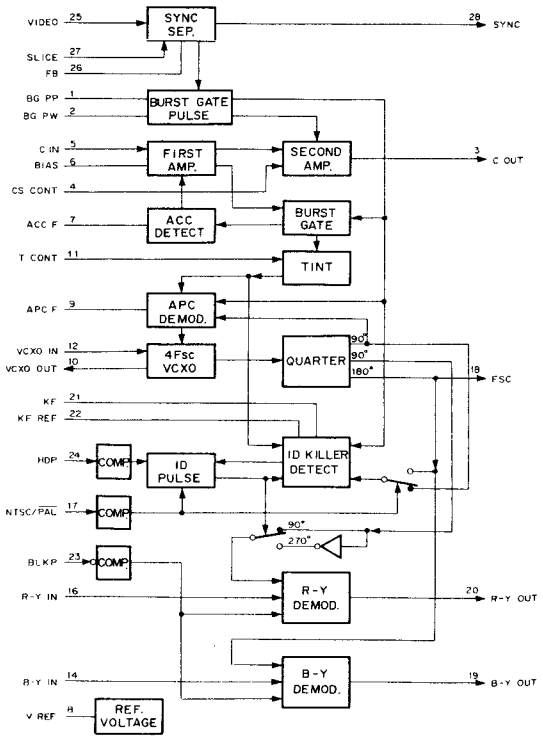


※|VDD+|Vss|=+5V to +12V

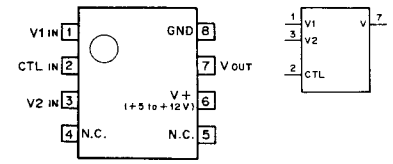
M51271FP (MITSUBISHI) FLAT PACKAGE
NTSC, PAL CHROMA DECODER
– TOP VIEW –

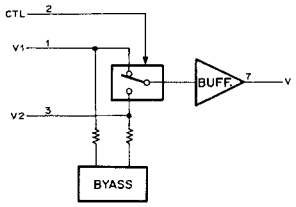


ACC F ; AUTOMATIC COLOR CONTROL FILTER
APC F ; AUTOMATIC PHASE CONTROL FILTER
BG PP ; BURST GATE PULSE POSITION
BG PW ; BURST GATE PULSE WIDTH
BIAS ; CHROMA INPUT BIAS CAPACITY
BLKP ; BLANKING PULSE INPUT
B-Y ; B-Y SIGNAL INPUT/OUTPUT
C ; CHROMA SIGNAL INPUT/OUTPUT
CS CONT ; COLOR SATURATION CONTROL
FB ; FEEDBACK CAPACITY OF SYNC SEPARATION
FSC ; SUB-CARRIER OUTPUT (180 DEGREES)
HDP ; HORIZONTAL DRIVE PULSE INPUT
KF ; KILLER FILTER CAPACITY
KF REF ; KILLER REFERENCE FILTER CAPACITY
NTSC/PAL ; PROCESS SELECT
R-Y ; R-Y SIGNAL INPUT/OUTPUT
SLICE ; SLICE LEVEL INPUT OF SYNC SEPARATION
SYNC ; SEPARATION SYNC SIGNAL OUTPUT
T CONT ; TINT CONTROL
VCXO ; VARIABLE CAPACITOR AND CRYSTAL OSCILLATOR
VIDEO ; VIDEO INPUT FOR SYNC SEPARATION
V REF ; REFERENCE VOLTAGE



NJM2233BM (JRC) FLAT PACKAGE
2-INPUT VIDEO SIGNAL SWITCH
– TOP VIEW –

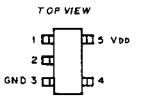


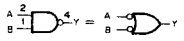


CTL	V
0	V1
1	V2

0 : LOW LEVEL
1 : HIGH LEVEL

SC7S00F (MOTOROLA) CHIP PACKAGE
TC7S00F (TOSHIBA) CHIP PACKAGE
TC7S00FU (TOSHIBA) CHIP PACKAGE
C-MOS 2-INPUT NAND GATE





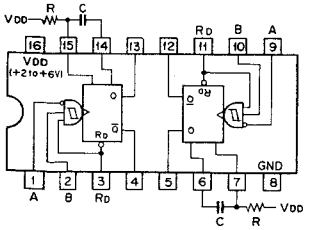
$Y = \overline{A \cdot B} = \overline{A} + \overline{B}$

A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

0 ; LOW LEVEL
1 ; HIGH LEVEL

TYPE	VDD
7S00F 7S00FU	+ 2 to + 6V
4S11F 4SU11F	+ 3 to + 18V
7SH00FU	+ 2 to + 5.5V

TC74HC221AF (TOSHIBA) FLAT PACKAGE
C-MOS MONOSTABLE MULTIVIBRATOR WITH SCHMITT TRIGGER INPUT
– TOP VIEW –

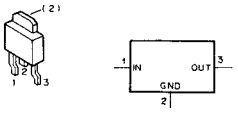


INPUTS			OUTPUTS	
RD	A	B	Q	$\overline{Q}$
0	X	X	0	1
X	1	X	0	1
X	X	0	0	1
1	0	↑	⌐¬	¬⌐
1	↓	1	⌐¬	¬⌐
↑	0	1	⌐¬	¬⌐

0;LOW LEVEL
1;HIGH LEVEL
X;DON'T CARE

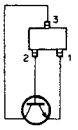
OUTPUT PULSE WIDTH = 0.7CR

PQ05SZ5U (SHARP) + 5V 0.5A
POSITIVE VOLTAGE REGULATOR



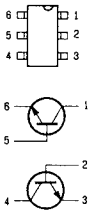
TRANSISTOR

TOP VIEW



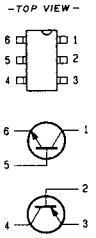
2SC2712
2SC2712G

– TOP VIEW –



IMX1

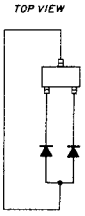
– TOP VIEW –



IMZ1

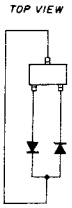
DIODE

TOP VIEW



1S2835
1S2836

TOP VIEW



1SS123
1SS226
MA153

SECTION 7
SPARE PARTS

7-1. NOTES ON SPARE PARTS

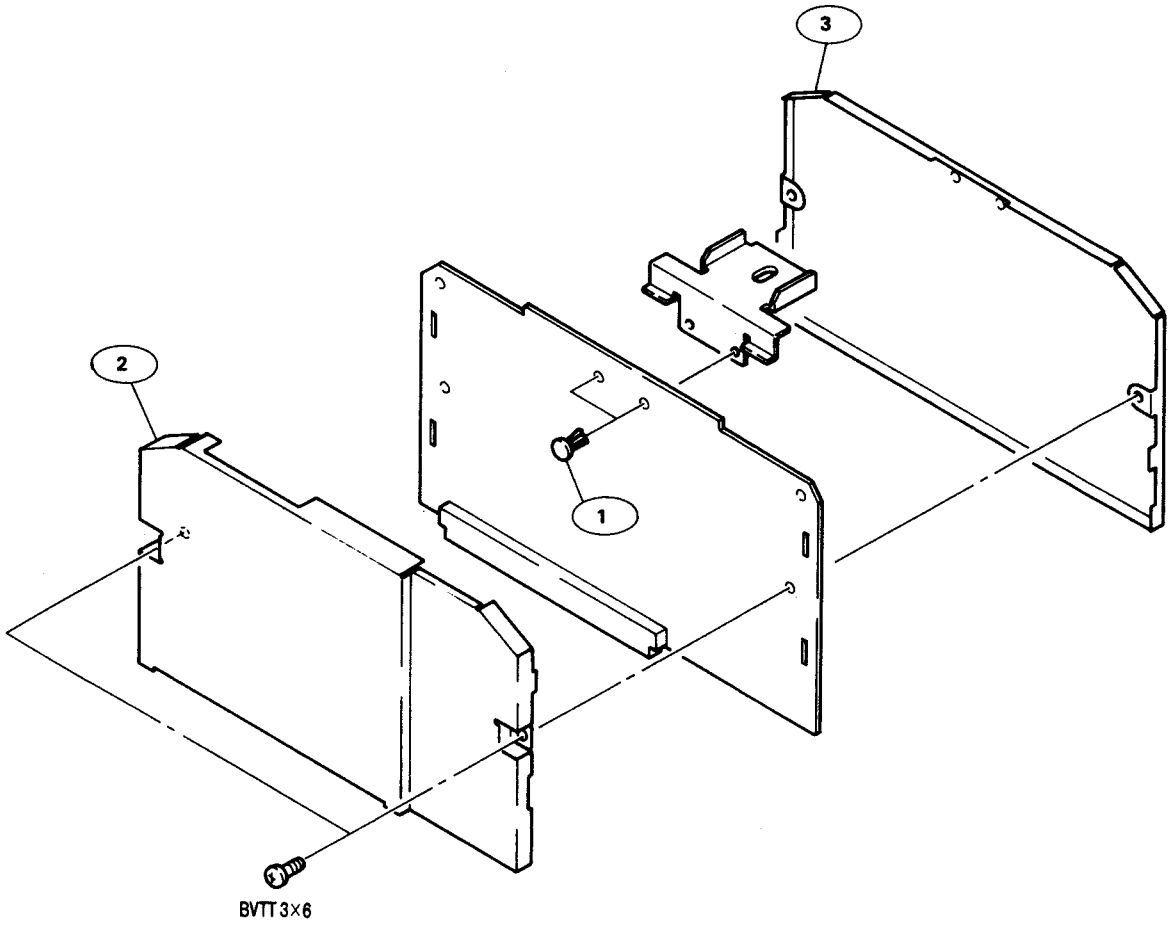
7-1-1. Notes on Spare Parts

1. Standardization of Parts
   Spare parts supplies form Sony Parts Center may not be always identical with the parts which actually in use due to "accommodating the improved parts and/or engineering changes" or "standardization of genuine parts".
   This manual's exploded views and electrical spare parts list are indicating the part numbers of "the standardized genuine parts at present."

2. Stock of Parts
   Parts marked with "o" in SP (Supply code) column of the spare parts list are not normally required for routine service work. Orders for parts marked with "o" will be processed, but allow for additional delivery time.

3. Units for Capacitors, Inductors and Resistors
   The following units are assumed in schematic diagrams, electrical parts list and exploded views unless otherwise specified:
   Capacitors : μF in schematic diagram
   : F of pF in schematic diagram
   Resistors : Ω

7-2. EXPLODED VIEW



No.	Part No.	SP	Description
1	3-646-090-11	s	RIVET, NYLON
2	3-681-795-01	o	CASE, SHIELD(A), DEC
3	3-681-796-01	o	CASE, SHIELD(B), DEC

7-3. ELECTRICAL PARTS LIST

DEC-75A BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	3-646-090-11	s	RIVET, NYLON
1pc	3-681-795-01	o	CASE,SHIELD(A),DEC
1pc	3-681-796-01	o	CASE,SHIELD(B),DEC
1pc	7-685-871-01	s	SCREW +BVTT 3X6 (S)
1pc	3-179-084-01	s	LEVER (R), PC BOARD
1pc	3-179-085-01	s	LEVER (L), PC BOARD
C101	1-124-584-00	s	ELECT 100uF 20% 10V
C102	1-163-235-11	s	CERAMIC, CHIP 22PF 5% 50V
C103	1-163-229-11	s	CERAMIC, CHIP 12PF 5% 50V
C104	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C105	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C106	1-163-122-00	s	CERAMIC, CHIP 160PF 5% 50V
C108	1-128-057-11	s	ELECT 330uF 20% 6.3V
C109	1-163-227-11	s	CERAMIC, CHIP 10PF 5% 50V
C110	1-163-104-00	s	CERAMIC, CHIP 30PF 5% 50V
C111	1-128-057-11	s	ELECT 330uF 20% 6.3V
C112	1-163-097-00	s	CERAMIC, CHIP 15PF 5% 50V
C113	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C114	1-124-584-00	s	ELECT 100uF 20% 10V
C201	1-163-237-11	s	CERAMIC, CHIP 27PF 5% 50V
C202	1-163-227-11	s	CERAMIC, CHIP 10PF 5% 50V
C204	1-124-584-00	s	ELECT 100uF 20% 10V
C205	1-163-235-11	s	CERAMIC, CHIP 22PF 5% 50V
C206	1-163-113-00	s	CERAMIC, CHIP 68PF 5% 50V
C207	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C208	1-163-243-11	s	CERAMIC, CHIP 47PF 5% 50V
C209	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C210	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C211	1-124-589-11	s	ELECT 47uF 20% 16V
C301	1-163-237-11	s	CERAMIC, CHIP 27PF 5% 50V
C302	1-163-227-11	s	CERAMIC, CHIP 10PF 5% 50V
C304	1-124-584-00	s	ELECT 100uF 20% 10V
C305	1-163-235-11	s	CERAMIC, CHIP 22PF 5% 50V
C306	1-163-113-00	s	CERAMIC, CHIP 68PF 5% 50V
C307	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C308	1-163-243-11	s	CERAMIC, CHIP 47PF 5% 50V
C311	1-124-589-11	s	ELECT 47uF 20% 16V
C400	1-126-157-11	s	ELECT 10uF 20% 16V
C401	1-163-275-11	s	CERAMIC, CHIP 0.001uF 5% 50V
C402	1-163-033-91	s	CERAMIC 0.022uF 50V
C403	1-131-347-00	s	TANTALUM 1uF 10% 35V
C404	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C405	1-163-033-91	s	CERAMIC 0.022uF 50V
C406	1-124-465-00	s	ELECT 0.47uF 20% 50V
C407	1-126-160-11	s	ELECT 1uF 20% 50V
C408	1-163-038-91	s	CERAMIC 0.1uF 25V
C409	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C410	1-104-760-11	s	CERAMIC 0.047uF 10% 50V
C411	1-131-347-00	s	TANTALUM 1uF 10% 35V
C412	1-104-760-11	s	CERAMIC 0.047uF 10% 50V
C413	1-124-584-00	s	ELECT 100uF 20% 10V
C414	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C415	1-131-351-00	s	TANTALUM 4.7uF 10% 35V
C416	1-163-038-91	s	CERAMIC 0.1uF 25V
C417	1-163-275-11	s	CERAMIC, CHIP 0.001uF 5% 50V
C418	1-163-227-11	s	CERAMIC, CHIP 10PF 5% 50V
C419	1-163-275-11	s	CERAMIC, CHIP 0.001uF 5% 50V
C420	1-163-275-11	s	CERAMIC, CHIP 0.001uF 5% 50V

(DEC-75A BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
C421	1-124-589-11	s	ELECT 47uF 20% 16V
C422	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C423	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C424	1-163-275-11	s	CERAMIC, CHIP 0.001uF 5% 50V
C425	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C426	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C427	1-163-263-11	s	CERAMIC, CHIP 330PF 5% 50V
C428	1-163-091-00	s	CERAMIC, CHIP 8PF 50V
C429	1-124-589-11	s	ELECT 47uF 20% 16V
C430	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C431	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C432	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C433	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C434	1-124-584-00	s	ELECT 100uF 20% 10V
C435	1-124-584-00	s	ELECT 100uF 20% 10V
C436	1-124-584-00	s	ELECT 100uF 20% 10V
C437	1-124-584-00	s	ELECT 100uF 20% 10V
C438	1-163-243-11	s	CERAMIC, CHIP 47PF 5% 50V
C439	1-124-589-11	s	ELECT 47uF 20% 16V
C440	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C441	1-124-584-00	s	ELECT 100uF 20% 10V
C442	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C443	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C444	1-163-038-91	s	CERAMIC 0.1uF 25V
C445	1-126-157-11	s	ELECT 10uF 20% 16V
C446	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
CN901	1-766-793-11	o	CONNECTOR, MULTIPLE 64P
CV401	1-141-422-11	s	CAP, ADJ
CV402	1-141-424-11	s	CAP, ADJ
D400	8-719-104-34	s	DIODE 1S2835
D401	8-719-800-76	s	DIODE 1SS226
FL101	1-236-716-11	s	FILTER, LOW PASS 5MHz
FL201	1-233-248-11	s	FILTER, LOW PASS 1.5MHz
FL301	1-233-248-11	s	FILTER, LOW PASS 1.5MHz
IC101	8-759-262-03	s	IC MC14577CF
IC201	8-759-262-03	s	IC MC14577CF
IC202	8-759-262-00	s	IC MC14576CF
IC401	8-759-603-54	s	IC M51271FP
IC402	8-759-239-58	s	IC TC74HC221AF
IC403	8-759-009-51	s	IC MC14538BF
IC404	8-759-058-54	s	IC TC7S00FU
IC405	8-759-710-86	s	IC NJM2233BM
IC410	8-759-182-84	s	IC PQ05SZ5U
IC411	8-759-822-95	s	IC L79M05T-FA
IC412	8-759-822-95	s	IC L79M05T-FA
L101	1-408-414-00	s	INDUCTOR 27uH
L102	1-410-470-11	s	INDUCTOR 10uH
L103	1-410-476-11	s	INDUCTOR 33uH
L104	1-408-411-00	s	INDUCTOR 15uH
L201	1-408-414-00	s	INDUCTOR 27uH
L202	1-410-466-41	s	INDUCTOR 4.7uH
L203	1-410-478-11	s	INDUCTOR 47uH
L301	1-408-414-00	s	INDUCTOR 27uH
L302	1-410-466-41	s	INDUCTOR 4.7uH
L303	1-410-478-11	s	INDUCTOR 47uH

(DEC-75A BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
L401	1-410-482-31	s	INDUCTOR 100uH
L402	1-410-482-31	s	INDUCTOR 100uH
L403	1-408-429-00	s	INDUCTOR 470uH
Q101	8-729-907-46	s	TRANSISTOR IMZ1
Q103	8-729-230-49	s	TRANSISTOR 2SC2712
Q104	8-729-907-46	s	TRANSISTOR IMZ1
Q105	8-729-230-49	s	TRANSISTOR 2SC2712
Q201	8-729-230-49	s	TRANSISTOR 2SC2712
Q202	8-729-907-46	s	TRANSISTOR IMZ1
Q203	8-729-907-46	s	TRANSISTOR IMZ1
Q301	8-729-230-49	s	TRANSISTOR 2SC2712
Q302	8-729-907-46	s	TRANSISTOR IMZ1
Q303	8-729-907-46	s	TRANSISTOR IMZ1
Q401	8-729-230-49	s	TRANSISTOR 2SC2712
Q402	8-729-907-26	s	TRANSISTOR IMX1
Q403	8-729-907-26	s	TRANSISTOR IMX1
R101	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R102	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R103	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R104	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R105	1-216-675-11	s	METAL, CHIP 10K 0.5% 1/10W
R106	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R108	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R109	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R110	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R111	1-216-624-11	s	METAL, CHIP 75 0.5% 1/10W
R112	1-216-041-00	s	METAL, CHIP 470 5% 1/10W
R113	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R114	1-208-774-11	s	METAL 470 0.50% 1/10W
R115	1-208-774-11	s	METAL 470 0.50% 1/10W
R116	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R117	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R118	1-216-684-91	s	METAL 24K 0.50% 1/10W
R119	1-216-642-11	s	METAL, CHIP 430 0.5% 1/10W
R120	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R121	1-208-774-11	s	METAL 470 0.50% 1/10W
R122	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R123	1-208-774-11	s	METAL 470 0.50% 1/10W
R124	1-216-642-11	s	METAL, CHIP 430 0.5% 1/10W
R125	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R200	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R201	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R202	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R203	1-208-812-11	s	METAL 18K 0.50% 1/10W
R204	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R205	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R206	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R207	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R208	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R209	1-216-041-00	s	METAL, CHIP 470 5% 1/10W
R210	1-216-635-11	s	METAL, CHIP 220 0.5% 1/10W
R211	1-208-774-11	s	METAL 470 0.50% 1/10W
R212	1-216-624-11	s	METAL, CHIP 75 0.5% 1/10W
R213	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R214	1-216-650-11	s	METAL, CHIP 910 0.5% 1/10W
R215	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R216	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R217	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W

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Ref. No. or Q'ty	Part No.	SP	Description
R218	1-216-083-00	s	METAL, CHIP 27K 5% 1/10W
R219	1-208-774-11	s	METAL 470 0.50% 1/10W
R300	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R301	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R302	1-208-812-11	s	METAL 18K 0.50% 1/10W
R303	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R304	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R305	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R306	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R307	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R308	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R309	1-216-041-00	s	METAL, CHIP 470 5% 1/10W
R310	1-216-646-11	s	METAL, CHIP 620 0.5% 1/10W
R311	1-208-774-11	s	METAL 470 0.50% 1/10W
R312	1-216-624-11	s	METAL, CHIP 75 0.5% 1/10W
R313	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R314	1-216-650-11	s	METAL, CHIP 910 0.5% 1/10W
R315	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R316	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R317	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R318	1-216-083-00	s	METAL, CHIP 27K 5% 1/10W
R319	1-216-641-11	s	METAL, CHIP 390 0.5% 1/10W
R400	1-216-663-11	s	METAL, CHIP 3.3K 0.5% 1/10W
R402	1-216-682-11	s	METAL, CHIP 20K 0.5% 1/10W
R403	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R404	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R405	1-216-095-00	s	METAL, CHIP 82K 5% 1/10W
R406	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R407	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R408	1-216-053-00	s	METAL, CHIP 1.5K 5% 1/10W
R409	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R410	1-218-768-11	s	METAL 470K 0.5% 1/10W
R411	1-216-667-11	s	METAL, CHIP 4.7K 0.5% 1/10W
R412	1-216-619-11	s	METAL, CHIP 47 0.5% 1/10W
R413	1-216-639-11	s	METAL, CHIP 330 0.5% 1/10W
R415	1-216-689-11	s	METAL, CHIP 39K 0.5% 1/10W
R417	1-216-295-91	s	RES, CHIP 0
R418	1-216-675-11	s	METAL, CHIP 10K 0.5% 1/10W
R419	1-216-673-11	s	METAL, CHIP 8.2K 0.5% 1/10W
R420	1-208-799-11	s	METAL 5.1K 0.50% 1/10W
R421	1-216-067-00	s	METAL, CHIP 5.6K 5% 1/10W
R422	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R423	1-216-295-91	s	RES, CHIP 0
R424	1-216-679-11	s	METAL, CHIP 15K 0.5% 1/10W
R425	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R426	1-216-631-11	s	METAL, CHIP 150 0.5% 1/10W
R427	1-208-812-11	s	METAL 18K 0.50% 1/10W
R428	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R429	1-216-685-11	s	METAL, CHIP 27K 0.5% 1/10W
R430	1-216-683-11	s	METAL, CHIP 22K 0.5% 1/10W
R432	1-216-648-11	s	METAL, CHIP 750 0.5% 1/10W
R433	1-216-648-11	s	METAL, CHIP 750 0.5% 1/10W
R434	1-208-774-11	s	METAL 470 0.50% 1/10W
R435	1-208-774-11	s	METAL 470 0.50% 1/10W
R436	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R437	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R438	1-216-648-11	s	METAL, CHIP 750 0.5% 1/10W
R439	1-216-649-11	s	METAL, CHIP 820 0.5% 1/10W
R440	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W

7-3. ELECTRICAL PARTS LIST

DEC-75A BOARD

Ref. No. or Q'ty	Part No.	SP	Description
1pc	3-646-090-11	s	RIVET, NYLON
1pc	3-681-795-01	o	CASE, SHIELD(A), DEC
1pc	3-681-796-01	o	CASE, SHIELD(B), DEC
1pc	7-685-871-01	s	SCREW +BVTT 3X6 (S)
1pc	3-179-084-01	s	LEVER (R), PC BOARD
1pc	3-179-085-01	s	LEVER (L), PC BOARD
C101	1-124-584-00	s	ELECT 100uF 20% 10V
C102	1-163-235-11	s	CERAMIC, CHIP 22PF 5% 50V
C103	1-163-229-11	s	CERAMIC, CHIP 12PF 5% 50V
C104	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C105	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C106	1-163-122-00	s	CERAMIC, CHIP 160PF 5% 50V
C108	1-128-057-11	s	ELECT 330uF 20% 6.3V
C109	1-163-227-11	s	CERAMIC, CHIP 10PF 5% 50V
C110	1-163-104-00	s	CERAMIC, CHIP 30PF 5% 50V
C111	1-128-057-11	s	ELECT 330uF 20% 6.3V
C112	1-163-097-00	s	CERAMIC, CHIP 15PF 5% 50V
C113	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C114	1-124-584-00	s	ELECT 100uF 20% 10V
C201	1-163-237-11	s	CERAMIC, CHIP 27PF 5% 50V
C202	1-163-227-11	s	CERAMIC, CHIP 10PF 5% 50V
C204	1-124-584-00	s	ELECT 100uF 20% 10V
C205	1-163-235-11	s	CERAMIC, CHIP 22PF 5% 50V
C206	1-163-113-00	s	CERAMIC, CHIP 68PF 5% 50V
C207	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C208	1-163-243-11	s	CERAMIC, CHIP 47PF 5% 50V
C209	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C210	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C211	1-124-589-11	s	ELECT 47uF 20% 16V
C301	1-163-237-11	s	CERAMIC, CHIP 27PF 5% 50V
C302	1-163-227-11	s	CERAMIC, CHIP 10PF 5% 50V
C304	1-124-584-00	s	ELECT 100uF 20% 10V
C305	1-163-235-11	s	CERAMIC, CHIP 22PF 5% 50V
C306	1-163-113-00	s	CERAMIC, CHIP 68PF 5% 50V
C307	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C308	1-163-243-11	s	CERAMIC, CHIP 47PF 5% 50V
C311	1-124-589-11	s	ELECT 47uF 20% 16V
C400	1-126-157-11	s	ELECT 10uF 20% 16V
C401	1-163-275-11	s	CERAMIC, CHIP 0.001uF 5% 50V
C402	1-163-033-91	s	CERAMIC 0.022uF 50V
C403	1-131-347-00	s	TANTALUM 1uF 10% 35V
C404	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C405	1-163-033-91	s	CERAMIC 0.022uF 50V
C406	1-124-465-00	s	ELECT 0.47uF 20% 50V
C407	1-126-160-11	s	ELECT 1uF 20% 50V
C408	1-163-038-91	s	CERAMIC 0.1uF 25V
C409	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C410	1-104-760-11	s	CERAMIC 0.047uF 10% 50V
C411	1-131-347-00	s	TANTALUM 1uF 10% 35V
C412	1-104-760-11	s	CERAMIC 0.047uF 10% 50V
C413	1-124-584-00	s	ELECT 100uF 20% 10V
C414	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C415	1-131-351-00	s	TANTALUM 4.7uF 10% 35V
C416	1-163-038-91	s	CERAMIC 0.1uF 25V
C417	1-163-275-11	s	CERAMIC, CHIP 0.001uF 5% 50V
C418	1-163-227-11	s	CERAMIC, CHIP 10PF 5% 50V
C419	1-163-275-11	s	CERAMIC, CHIP 0.001uF 5% 50V
C420	1-163-275-11	s	CERAMIC, CHIP 0.001uF 5% 50V

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Ref. No. or Q'ty	Part No.	SP	Description
C421	1-124-589-11	s	ELECT 47uF 20% 16V
C422	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C423	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C424	1-163-275-11	s	CERAMIC, CHIP 0.001uF 5% 50V
C425	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
C426	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C427	1-163-263-11	s	CERAMIC, CHIP 330PF 5% 50V
C428	1-163-091-00	s	CERAMIC, CHIP 8PF 50V
C429	1-124-589-11	s	ELECT 47uF 20% 16V
C430	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C431	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C432	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C433	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C434	1-124-584-00	s	ELECT 100uF 20% 10V
C435	1-124-584-00	s	ELECT 100uF 20% 10V
C436	1-124-584-00	s	ELECT 100uF 20% 10V
C437	1-124-584-00	s	ELECT 100uF 20% 10V
C438	1-163-243-11	s	CERAMIC, CHIP 47PF 5% 50V
C439	1-124-589-11	s	ELECT 47uF 20% 16V
C440	1-163-239-11	s	CERAMIC, CHIP 33PF 5% 50V
C441	1-124-584-00	s	ELECT 100uF 20% 10V
C442	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C443	1-164-232-11	s	CERAMIC, CHIP 0.01uF 10% 100V
C444	1-163-038-91	s	CERAMIC 0.1uF 25V
C445	1-126-157-11	s	ELECT 10uF 20% 16V
C446	1-163-251-11	s	CERAMIC, CHIP 100PF 5% 50V
CN901	1-766-793-11	o	CONNECTOR, MULTIPLE 64P
CV401	1-141-422-11	s	CAP, ADJ
CV402	1-141-424-11	s	CAP, ADJ
D400	8-719-104-34	s	DIODE 1S2835
D401	8-719-800-76	s	DIODE 1SS226
FL101	1-236-716-11	s	FILTER, LOW PASS 5MHz
FL201	1-233-248-11	s	FILTER, LOW PASS 1.5MHz
FL301	1-233-248-11	s	FILTER, LOW PASS 1.5MHz
IC101	8-759-262-03	s	IC MC14577CF
IC201	8-759-262-03	s	IC MC14577CF
IC202	8-759-262-00	s	IC MC14576CF
IC401	8-759-603-54	s	IC M51271FP
IC402	8-759-239-58	s	IC TC74HC221AF
IC403	8-759-009-51	s	IC MC14538BF
IC404	8-759-058-54	s	IC TC7S00FU
IC405	8-759-710-86	s	IC NJM2233BM
IC410	8-759-182-84	s	IC PQ05SZ5U
IC411	8-759-822-95	s	IC L79M05T-FA
IC412	8-759-822-95	s	IC L79M05T-FA
L101	1-408-414-00	s	INDUCTOR 27uH
L102	1-410-470-11	s	INDUCTOR 10uH
L103	1-410-476-11	s	INDUCTOR 33uH
L104	1-408-411-00	s	INDUCTOR 15uH
L201	1-408-414-00	s	INDUCTOR 27uH
L202	1-410-466-41	s	INDUCTOR 4.7uH
L203	1-410-478-11	s	INDUCTOR 47uH
L301	1-408-414-00	s	INDUCTOR 27uH
L302	1-410-466-41	s	INDUCTOR 4.7uH
L303	1-410-478-11	s	INDUCTOR 47uH

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Ref. No. or Q'ty	Part No.	SP	Description
L401	1-410-482-31	s	INDUCTOR 100uH
L402	1-410-482-31	s	INDUCTOR 100uH
L403	1-408-429-00	s	INDUCTOR 470uH
Q101	8-729-907-46	s	TRANSISTOR IMZ1
Q103	8-729-230-49	s	TRANSISTOR 2SC2712
Q104	8-729-907-46	s	TRANSISTOR IMZ1
Q105	8-729-230-49	s	TRANSISTOR 2SC2712
Q201	8-729-230-49	s	TRANSISTOR 2SC2712
Q202	8-729-907-46	s	TRANSISTOR IMZ1
Q203	8-729-907-46	s	TRANSISTOR IMZ1
Q301	8-729-230-49	s	TRANSISTOR 2SC2712
Q302	8-729-907-46	s	TRANSISTOR IMZ1
Q303	8-729-907-46	s	TRANSISTOR IMZ1
Q401	8-729-230-49	s	TRANSISTOR 2SC2712
Q402	8-729-907-26	s	TRANSISTOR IMX1
Q403	8-729-907-26	s	TRANSISTOR IMX1
R101	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R102	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R103	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R104	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R105	1-216-675-11	s	METAL, CHIP 10K 0.5% 1/10W
R106	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R108	1-216-049-00	s	METAL, CHIP 1K 5% 1/10W
R109	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R110	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R111	1-216-624-11	s	METAL, CHIP 75 0.5% 1/10W
R112	1-216-041-00	s	METAL, CHIP 470 5% 1/10W
R113	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R114	1-208-774-11	s	METAL 470 0.50% 1/10W
R115	1-208-774-11	s	METAL 470 0.50% 1/10W
R116	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R117	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R118	1-216-684-91	s	METAL 24K 0.50% 1/10W
R119	1-216-642-11	s	METAL, CHIP 430 0.5% 1/10W
R120	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R121	1-208-774-11	s	METAL 470 0.50% 1/10W
R122	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R123	1-208-774-11	s	METAL 470 0.50% 1/10W
R124	1-216-642-11	s	METAL, CHIP 430 0.5% 1/10W
R125	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R200	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R201	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R202	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R203	1-208-812-11	s	METAL 18K 0.50% 1/10W
R204	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R205	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R206	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R207	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R208	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R209	1-216-041-00	s	METAL, CHIP 470 5% 1/10W
R210	1-216-635-11	s	METAL, CHIP 220 0.5% 1/10W
R211	1-208-774-11	s	METAL 470 0.50% 1/10W
R212	1-216-624-11	s	METAL, CHIP 75 0.5% 1/10W
R213	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R214	1-216-650-11	s	METAL, CHIP 910 0.5% 1/10W
R215	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R216	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R217	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W

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Ref. No. or Q'ty	Part No.	SP	Description
R218	1-216-083-00	s	METAL, CHIP 27K 5% 1/10W
R219	1-208-774-11	s	METAL 470 0.50% 1/10W
R300	1-216-025-00	s	METAL, CHIP 100 5% 1/10W
R301	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R302	1-208-812-11	s	METAL 18K 0.50% 1/10W
R303	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R304	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R305	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R306	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R307	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R308	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R309	1-216-041-00	s	METAL, CHIP 470 5% 1/10W
R310	1-216-646-11	s	METAL, CHIP 620 0.5% 1/10W
R311	1-208-774-11	s	METAL 470 0.50% 1/10W
R312	1-216-624-11	s	METAL, CHIP 75 0.5% 1/10W
R313	1-216-073-00	s	METAL, CHIP 10K 5% 1/10W
R314	1-216-650-11	s	METAL, CHIP 910 0.5% 1/10W
R315	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R316	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R317	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R318	1-216-083-00	s	METAL, CHIP 27K 5% 1/10W
R319	1-216-641-11	s	METAL, CHIP 390 0.5% 1/10W
R400	1-216-663-11	s	METAL, CHIP 3.3K 0.5% 1/10W
R402	1-216-682-11	s	METAL, CHIP 20K 0.5% 1/10W
R403	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R404	1-216-081-00	s	METAL, CHIP 22K 5% 1/10W
R405	1-216-095-00	s	METAL, CHIP 82K 5% 1/10W
R406	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R407	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R408	1-216-053-00	s	METAL, CHIP 1.5K 5% 1/10W
R409	1-216-651-11	s	METAL, CHIP 1K 0.5% 1/10W
R410	1-218-768-11	s	METAL 470K 0.5% 1/10W
R411	1-216-667-11	s	METAL, CHIP 4.7K 0.5% 1/10W
R412	1-216-619-11	s	METAL, CHIP 47 0.5% 1/10W
R413	1-216-639-11	s	METAL, CHIP 330 0.5% 1/10W
R415	1-216-689-11	s	METAL, CHIP 39K 0.5% 1/10W
R417	1-216-295-91	s	RES, CHIP 0
R418	1-216-675-11	s	METAL, CHIP 10K 0.5% 1/10W
R419	1-216-673-11	s	METAL, CHIP 8.2K 0.5% 1/10W
R420	1-208-799-11	s	METAL 5.1K 0.50% 1/10W
R421	1-216-067-00	s	METAL, CHIP 5.6K 5% 1/10W
R422	1-216-687-11	s	METAL, CHIP 33K 0.5% 1/10W
R423	1-216-295-91	s	RES, CHIP 0
R424	1-216-679-11	s	METAL, CHIP 15K 0.5% 1/10W
R425	1-216-065-00	s	METAL, CHIP 4.7K 5% 1/10W
R426	1-216-631-11	s	METAL, CHIP 150 0.5% 1/10W
R427	1-208-812-11	s	METAL 18K 0.50% 1/10W
R428	1-216-699-11	s	METAL, CHIP 100K 0.5% 1/10W
R429	1-216-685-11	s	METAL, CHIP 27K 0.5% 1/10W
R430	1-216-683-11	s	METAL, CHIP 22K 0.5% 1/10W
R432	1-216-648-11	s	METAL, CHIP 750 0.5% 1/10W
R433	1-216-648-11	s	METAL, CHIP 750 0.5% 1/10W
R434	1-208-774-11	s	METAL 470 0.50% 1/10W
R435	1-208-774-11	s	METAL 470 0.50% 1/10W
R436	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R437	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W
R438	1-216-648-11	s	METAL, CHIP 750 0.5% 1/10W
R439	1-216-649-11	s	METAL, CHIP 820 0.5% 1/10W
R440	1-216-057-00	s	METAL, CHIP 2.2K 5% 1/10W

(DEC-75A BOARD)

Ref. No. or Q'ty	Part No.	SP	Description
R441	1-216-649-11	s	METAL, CHIP 820 0.5% 1/10W
RV101	1-241-761-11	s	RES, ADJ METAL 1k
RV201	1-241-761-11	s	RES, ADJ METAL 1k
RV301	1-241-761-11	s	RES, ADJ METAL 1k
RV403	1-241-784-11	s	RES, ADJ METAL 4.7k
X401	1-577-259-11	s	CRYSTAL 17.734476MHz

PACKING MATERIALS & SUPPLIED ACCESSORIES

Ref. No. or Q'ty	Part No.	SP	Description
1pc	3-704-046-91	s	BAG, PREVENTION, ELECTRIFICATION
1pc	3-759-423-01	s	MANUAL, INSTRUCTION